

REMARKS

The examiner rejected independent claims 1, 13, 30, 42, 54, 66, 80, and 86 under §102 in view of a variety of references. The applicant offers the following remarks in response.

Claim 1 of the present invention claims a method for controlling the retransmission of data packets when retransmission is necessary. In particular, the transmitter of claim 1 adaptively selects a retransmission protocol based on at least one changing transmission variable. Exemplary transmission variables, as defined on pg. 9, ll. 8 – 12 of the instant application include a change in channel quality between different transmissions, a change in signal-to-noise ratio between different transmissions, the coding rate used for transmission, the modulation used for transmission, etc. It should be noted that the information used to select the retransmission protocol is already available to the transmitter. For example, the transmitter receives SNR feedback from the receiver for link adaptation purposes. In the present invention, the transmitter uses information, such as the SNR, that is locally available for other purposes to select a retransmission protocol.

The remaining independent claims all require selecting a retransmission protocol based on at least one changing transmission variable, as shown in the following table.

Claim	Limitation
13	selectively transmitting either said first version of said message or a second version of said message based on at least one changing transmission variable
30	a controller connected to said transmitter to adaptively select a retransmission protocol from two or more retransmission protocols based on at least one changing transmission variable
42	a controller adaptively controlling said transmitter to selectively transmit in a second transmission either said first version of said message or a second version of said message based on at least one changing transmission variable
54	a logic circuit (in a control circuit for a transmitter) to adaptively select a retransmission protocol from two or more retransmission protocols based on at least one changing transmission variable
66	a control circuit to adaptively select either said first version of said coded message or said second version of said coded message for transmission

	in a second transmission based on at least one changing transmission variable
80	computer program causing the transmitter to adaptively select a retransmission protocol for transmitting a message from two or more retransmission protocols based on at least one changing transmission variable
86	computer program causing the transmitter to selectively transmit in a second transmission either said first version of said coded message or a second version of said coded message based on at least one changing transmission variable

The applicant reminds the examiner that the law of anticipation requires that every element or limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim. *In re Bond*, 910 F.2d 831, 323 (Fed. Cir. 1990). As discussed further below, none of the cited references identically teach each and every limitation of the independent claims.

§102(a) rejection of claims 1, 13, 30, 42, 54, 66, 80, & 86 in view of Classon (US2003/118031)

The examiner rejected independent claims 1, 13, 30, 42, 54, 66, 80, and 86 under §102(a) in view of the Classon application. In rejecting these claims, the examiner asserts that the Classon application clearly anticipates the claimed invention because Classon “teaches one of ordinary skill in the art at the time of applicant’s invention to provide method steps, means or circuits, a controller or control means, or a computer program for selecting a retransmission protocol based on a changing transmission variable (quality).” This rejection appears to be based on pure speculation because the examiner does not cite any portion of the Classon application to support his assertion. Because the examiner does not provide any evidence to support the rejection, the rejection is legally insufficient and must be withdrawn.

Further, the transmitter of the Classon application does not select a retransmission protocol based on a changing transmission variable, as required by the claimed invention. Instead, a remote receiver selects a retransmission protocol and sends a retransmission request to the transmitter that explicitly identifies the retransmission protocol to use. In

response, the transmitter retransmits the data to the receiver according to the retransmission protocol selected by the remote receiver. For at least these reasons, the Classon application does not anticipate any of the independent claims.

§102(a) rejection of claims 1, 13, 30, 42, 54, 66, 80, & 86 in view of Imahashi (JP 2002-319923)

The examiner rejected independent claims 1, 13, 30, 42, 54, 66, 80, and 86 under §102(a) in view of Imahashi. As with the Classon rejection, the examiner provides no evidence to support the rejection of the independent claims in view of Imahashi. As such, the rejection is improper and must be withdrawn.

Further, Imahashi describes changing an error correction code length for transmitting data based on a frequency of received errors (see paragraph [0013]). While the code length may change, the retransmission protocol remains fixed. Contrastingly, the claimed invention requires selecting a retransmission protocol based on a changing transmission variable. For at least these reasons, Imahashi does not teach or suggest the invention of independent claims 1, 13, 30, 42, 54, 66, 80, and 86.

§102(b) rejection of claims 1, 13, 30, 42, 54, and 66 in view of Ghosh (US6308294)

The examiner rejected independent claims 1, 13, 30, 42, 54, and 66 under §102(b) in view of Ghosh. As with the Classon and Imahashi rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Ghosh. As such, the rejections are improper and must be withdrawn.

Further, Ghosh does not teach or suggest selecting a retransmission protocol based on at least one changing transmission variable, as required by the claimed invention. Instead, Ghosh describes an adaptive hybrid automatic repeat request (HARQ) system consisting of a parallel concatenation of two convolutional encoders (see col. 3, ll. 23 – 25). The described invention selects a code rate for the HARQ system based on whether or not a carrier-to-

interference ratio (C/I) exceeds a preset threshold (see col. 3, ll. 50 – 64 and Figure 3). Nothing in Ghosh even mentions selecting different retransmission protocols. Therefore, Ghosh does not anticipate independent claims 1, 13, 30, 42, 54, and 66.

§102(b) rejection of claims 1, 13, 30, 42, 54, and 66 in view of Ott (US6182264)

The examiner rejected independent claims 1, 13, 30, 42, 54, and 66 under §102(b) in view of Ott. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Ott. As such, the rejections are improper and must be withdrawn.

Further, Ott selects a retransmission protocol at the receiver based on a BER of the received data calculated at the receiver. Contrastingly, the claimed invention selects a retransmission protocol at the transmitter based on at least one changing transmission variable. Further, as stated above, the transmitter uses transmission variable information locally available to the transmitter for other purposes to select a retransmission protocol. Nothing in Ott teaches or suggests selecting the retransmission protocol at the transmitter, as required by the claimed invention. Further, nothing in Ott teaches or suggests making the selection based on readily available transmission variables, as required by the claimed invention. For at least these reasons, Ott does not anticipate claims 1, 13, 30, 42, 54, and 66.

§102(b) rejection of claims 1, 13, 30, 42, 54, and 66 in view of Anders Nystrom (US6189123)

The examiner rejected independent claims 1, 13, 30, 42, 54, and 66 under §102(b) in view of Anders Nystrom. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Anders Nystrom. As such, the rejections are improper and must be withdrawn.

Further, Anders Nystrom teaches the general concept of retransmitting data N times when the received data cannot be recovered with the desired accuracy, where N is determined

based on the quality of the channel conditions (see at least Abstract, Figure 5, Figure 7, col. 10, ll. 7 – 18). As such, Anders Nystrom teaches selecting the number of retransmissions based on the quality of the channel conditions. Such teachings are wholly different from selecting a retransmission protocol based on a changing transmission variable. For at least this reason, Anders Nystrom does not anticipate claims 1, 13, 30, 42, 54, and 66.

§102(b) rejection of claims 1, 13, 30, 42, 54, and 66 in view of Park (GB2345829)

The examiner rejected independent claims 1, 13, 30, 42, 54, and 66 under §102(b) in view of Parker. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Parker. As such, the rejections are improper and must be withdrawn.

Further, Park describes a video coding method that adaptively adds redundancy information based on received channel status information (see at least the Abstract, pg. 2, ll. 11 – 19). Clearly, adding redundancy information, as taught by Park, is not the same as selecting a retransmission protocol, as claimed in the instant application. In addition, the received channel status information described by Park is not the same as the transmission variable described by the instant application. For at least these reasons, Park does not anticipate claims 1, 13, 30, 42, 54, and 66.

§102(b) rejection of claims 1, 13, 30, 42, 54, 66, 80, and 86 in view of Baker (GB2346303)

The examiner rejected independent claims 1, 13, 30, 42, 54, 66, 80, and 86 under §102(b) in view of Baker. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Baker. As such, the rejections are improper and must be withdrawn.

Further, Baker describes a transmission system that varies the level of error protection based on the data category, e.g., text, video, sound, etc., according to a user-specified priority

(see Abstract, claims, etc.). On pg. 5, ll. 4 – 14, Baker describes varying the level of error protection by varying the amount of redundancy the data to be transmitted. Nothing in Baker teaches or suggests that varying the level of error protection comprises varying retransmission protocols. In addition, Baker does not base any operations on changing transmission variables. For at least these reasons, Baker does not anticipate claims 1, 13, 30, 42, 54, 66, 80, and 86.

§102(b) rejection of claims 1, 13, 30, 42, 54, 66, 80, and 86 in view of Kang (GB2357017)

The examiner rejected independent claims 1, 13, 30, 42, 54, 66, 80, and 86 under §102(b) in view of Kang. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Kang. As such, the rejections are improper and must be withdrawn.

Further, Kang teaches a combination ARQ and FEC retransmission system that varies the encoding ratio of the FEC dependent on an error ratio estimated for the forward channel. Because Kang only describes one retransmission protocol (a combination of ARQ and FEC), Kang necessarily does not select a retransmission protocol, as required by the claimed invention. In addition, the operations described by Kang are based on an estimated error ratio. Because the error ratio is wholly different from the claimed changing transmission variable(s), Kang also does not teach performing any operations based on one or more changing transmission variables. For at least these reasons, Kang does not anticipate claims 1, 13, 30, 42, 54, 66, 80, and 86.

§102(b) rejection of claims 1, 13, 54, and 66 in view of Kobayashi (JP 2001-43953)

The examiner rejected independent claims 1, 13, 54, and 66 under §102(b) in view of Kobayashi. As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Kobayashi. As such, the rejections are improper and must be withdrawn.

In addition, Kobayashi teaches selecting different types of FEC codes, such as turbo and convolutional codes, based on channel conditions derived from transmitted training symbols (see at least para. [0068]). Because all FEC codes are part of a single retransmission protocol, Kobayashi does not teach or suggest selecting different retransmission protocols, as required by the claimed invention. Further, Kobayashi requires selecting the retransmission protocol based on the quality of a current transmission channel. Contrastingly, the claimed invention requires selecting the retransmission protocol based on at least one changing transmission variable. For at least these reasons, Kobayashi does not anticipate claims 1, 13, 54, and 66.

§102(b) rejection of claims 1, 13, 54, and 66 in view of Yoshida (JP 2002-43953)

The examiner rejected independent claims 1, 13, 54, and 66 under §102(b) in view of Yoshida (also referenced by EP1176748). As with the earlier discussed rejections, the examiner provides no evidence to support the rejection of the independent claims in view of Yoshida. As such, the rejections are improper and must be withdrawn.

Further, Yoshida describes encoding data with two different codes (i.e., code A and code B), and transmitting the data encoded with code A, followed by transmitting the data encoded with code B (see Figures, Abstract, Summary, paragraphs [0022] – [0023], etc.). As such, while Yoshida uses different codes, Yoshida does not teach selecting a retransmission protocol or making that selection based on a changing transmission variable, as required by the claimed invention. For at least these reasons, Yoshida does not anticipate claims 1, 13, 54, and 66.

§102(b) rejection of claim 66 in view of Lee (US2002/0053058)

The examiner rejected independent claim 66 under §102(b) in view of Lee. Lee teaches retransmitting data using only an HARQ protocol. As such, Lee does not teach selecting a first or second version of a coded message for a second data transmission, as required by claim 66. Further, nothing in Lee teaches selecting data for retransmission based on a changing

transmission variable, as required by claim 66. Instead, Lee simply teaches retransmitting data using HARQ upon detecting an error. Because Lee does not teach or suggest selecting either a first version of a coded message or a second version of the coded message for transmission in a second transmission based on at least one changing transmission variable, Lee does not anticipate independent claim 66.

§102(e) rejection of claims 54 and 66 in view of Classon (US6732321)

The examiner rejected independent claims 54 and 66 under §102(e) in view of the Classon patent. The Classon patent is different from the above-discussed Classon application.

The Classon patent is solely focused on the operation of a receiver, and therefore, has nothing to do with the transmitter operations of the claimed invention. More particularly, the Classon patent describes a receiver that includes a weighting device for determining and weighting a plurality of reliability values related to the received data (see Abstract, claim 17, etc.). The receiver uses these weighted reliability values to implement channel management procedures. As the examiner points out, this channel management procedures include error detection, error concealment, coding rate determination, or coding rate selection procedures. However, none of these elements have anything to do with retransmission protocols. Instead, the coding rate determination/selection corresponds to the coding rate of the decoder in the receiver (col. 3, ll. 39 – 41), while the error detection and error concealment processes correspond to detecting errors in the received signal and reducing the effects of the detected errors, respectively (col. 3, ll. 33 – 38). Because nothing in the Classon patent teaches or suggests selecting a retransmission protocol at a transmitter based on one or more changing transmission variables, as required by the claimed invention, the Classon patent does not anticipate independent claims 54 and 66.

Summary

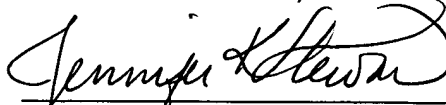
For at least the reasons presented above, none of the cited references identically teach each limitation of independent claims 1, 13, 30, 42, 54, 66, 80, and 86. As such, none of the cited references anticipate claims 1 – 90. The applicant respectfully requests reconsideration and allowance of all pending claims.

If the examiner insists on maintaining any of the rejections, the applicant respectfully requests that the examiner provide detailed evidence to support each rejection by providing detailed rejections for each limitation of each rejected claim. More particularly, for each rejected claim, the applicant requests that the examiner support the rejection by citing specific sections from each cited reference, as required by MPEP §706 and §707.07(d). Further, should the examiner insist on maintaining any rejections in view of Imahashi or Kobayashi, the applicant requests that the examiner provide a non-computer generated translation. The grammar and poor punctuation of the currently provided translations renders these translations inappropriate for use in the official prosecution record.

While the applicant submits that the above remarks address all of the pending rejections, should any issues remain unresolved, the applicant requests that the examiner call the undersigned so that any such issues may be expeditiously resolved.

Respectfully submitted,

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